ATTORNEY DOCKET NO: KCX-224 (15065)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Bruce S. Williamson, et al.	)	Examiner: I. Cintins
Serial No:	09/712,085	)	Art Unit: 1724
Filed:	November 14, 2000	)	Customer No: 22827
For:	Filtration Device	)	Account No: 04-1403

APPEAL BRIEF

Honorable Commissioner of
Patents and Trademarks
PO Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants' hereby submit this Appeal Brief in accordance with 37 CFR §1.192 for the above-captioned application. The Notice of Appeal was filed on September 29, 2004, in accordance with 37 CFR §1.8.

Applicants are submitting the fee for the filing of the preset Appeal Brief as set forth in 37 CFR §1.17(c).

If any further fee or extension of time is required to obtain entry of the Appeal Brief, Applicants hereby petition the Commissioner to grant any necessary time extension, and the undersigned hereby authorizes the Commissioner to pay from Deposit Account No. 04-1403, any such fee not submitted herewith.

11/29/2004 ZJUHAR1 00000001 09712085
01 FC:1402 340.00 OP

11/26/2004 ZJUHAR1 00000032 09712085
01 FC:1401 ~~340.00 OP~~

Adjustment date: 11/29/2004 ZJUHAR1
11/26/2004 ZJUHAR1 00000032 09712085 -340.00 OP
01 FC:1401

1. **REAL PARTY IN INTEREST:**

By assignment recorded on May 11, 2001, at reel 011801, frame 0343, the real party in interest is KIMBERLY-CLARK WORLDWIDE, INC., a corporation of the state of Delaware, whose internal address is 401 North Lake Street, Neenah, Wisconsin, 54956.

2. **RELATED APPEALS AND INTERFERENCES:**

There are no related appeals or interferences.

3. **STATUS OF CLAIMS:**

A provisional application was filed on December 16, 1999 and a utility application claiming priority to the provisional application was filed on November 14, 2000, with claims 1-28. Claims 1, 13 and 24 were filed as independent claims.

By amendment that was mailed on August 29, 2002, claims 4, 10, 12, 16, 23 and 26 were amended.

By amendment that was submitted with a Request for Continued Examination (RCE) that was mailed on October 21, 2003, claims 1, 13 and 24 were amended.

The claims 1–28 as amended are included in the attached Appendix.

Claims 1, 2, 5-8, 11-14, 17-20, 22-24 and 26-28 stand finally rejected, (Advisory Action mailed September 15, 2004 and the final Office Action mailed June 29, 2004) under 35 U.S.C. §103(a) as being unpatentable over Patrick, et al. (U.S. Patent Number 5,762,797) in view of May, et al. (U.S. Patent Number 3,209,916).

Claims 9, 10, 21 and 25 stand finally rejected under 35 U.S.C. §103(a) as being unpatentable over Patrick in view of May and further in view of Hiasa, et al. (U.S. Patent Number 4,607,595).

Claims 3, 4, 15 and 16 stand finally rejected under 35 U.S.C. §103(a) as being unpatentable over Patrick, May and Hiasa and further in view of Pall, et al. (U.S. Patent Number 4,523,995).

Applicants appeal all of the final rejections to claims 1-28.

4. **STATUS OF AMENDMENTS:**

A first Final Rejection was mailed in an Office Action on May 21, 2003 rejecting claims 1-28. Applicants mailed an Amendment after Final on July 14, 2003 that amended claims 1, 13 and 24 and argued against the rejections to claims 1-28. A first Advisory Action was mailed on August 13, 2003 that refused to enter Applicants Amendment of July 14, 2003. Applicants filed a Request for Continued Examination (RCE) on October 21, 2003 in order to obtain entry of the Amendment mailed July 14, 2003.

An Office Action was mailed on February 13, 2004 rejecting claims 1-28. Applicants mailed a Response on March 31, 2004 that traversed the rejections to claims 1-28 in the Office Action of February 13, 2004. A second Final Office Action was mailed on June 29, 2004 rejecting claims 1-28. Applicants mailed a Response on August 19, 2004 that traversed the rejections to claims 1-28 set forth in the final Office Action June 29, 2004. Applicants Response was entered into the case by way of a second Advisory Action mailed September 15, 2004, but the final rejection to claims 1-28 was maintained.

5. **SUMMARY OF THE INVENTION:**

The present invention relates to a filter that may be used to remove constituents from a variety of fluids such as water or gasoline. The present invention allows for a filter that may achieve a low-pressure drop while enjoying a high efficiency and occupying a minimum amount of space.

Claims 1-28 are drawn generally towards a filtration device 10 that includes a filter media 14 spirally wound with generally complete overlap and contact between adjacent layers such that edges of the layers are generally aligned in a common plane (see Fig. 3 and page 15, lines 5-10 of the specification). A core 18 defining apertures 16 is in fluid communication with the filter media 14 (see Figs. 1-3). Claims 1-12 and 24-28 call for a filtration device 10 in which unfiltered fluid enters the filtration device 10 through an unfiltered fluid inlet surface 12 so as to flow radially inward and exit the core 18 at a filtered fluid outlet 20 (see page 13, lines 6-13 of the specification and Fig. 1). Claims 13-23 call for another embodiment of the invention in which unfiltered fluid flows into the filtration device 10 through an unfiltered fluid inlet 112 and into core 118 and then flows radially outward through the filter media 114 exiting the filtration device 110 through a filtered fluid outlet surface 120 (see page 13, lines 14-22 of the specification and Fig. 2).

6. **ISSUES:**

Claims 1, 2, 5-8, 11-14, 17-20, 22-24 and 26-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Patrick in view of May. Claims 9, 10, 21 and 25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Patrick

in view of May and further in view of Hiasa. Claims 3, 4, 15 and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Patrick, May and Hiasa and further in view of Pall.

7. **GROUPING OF CLAIMS:**

Claims 1-28 rise or fall together.

8. **ARGUMENTS:**

Each of the rejected claims 1-28 is drawn to a filtration device that includes a core and a filter or filtration media that is spirally wound with generally complete overlap and contact between adjacent layers so that the edges of the layers are generally aligned in a common plane.

A. EVEN IF PATRICK AND MAY WERE PROPERLY COMBINED, THE RESULTING COMBINATION DOES NOT TEACH OR SUGGEST THE CLAIMED INVENTION.

In order to establish a case of *prima facie* obviousness the combination of references must teach or suggest all of the claim limitations of Applicants' claim. *In re Royka*, 490 F.2d 981,180, U.S.P.Q. 580 (CCPA 1974). In addition, all words in the claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 135, 165 U.S.P.Q. 494, 496 (CCPA 1970). All of the independent claims in Applicants' application call for a filter or filtration media that is sprially wound with generally complete overlap and contact between adjacent layers so that edges of the layers are generally aligned in a common plane.

These claim elements are not found in Patrick and May, or any reasonable combination of the references.

The Office Action mailed June 29, 2004 stated that the primary reference of Patrick "discloses the claimed invention with the exception of the recited spirally wound layers" (see page 2 of the Office Action of June 29, 2004). The June 29, 2004 Office Action also stated that May disclosed constructing plural concentric filtration layers in the recited manner and that it would have been obvious to one of ordinary skill in the art to construct the concentric filtration layers of Patrick in the manner suggested by May in order to ensure the filtration layers do not separate from one another as set forth in column 2, lines 5-7 of May. The Office Action, however, does not make clear whether one would rearrange the layers of Patrick so as to be sprially wound, or if one would simply add one or more layers of May into the device of Patrick.

Applicants admit that the filter 10 of May is shown as being made from a plurality of concentric layers. However, May does not disclose a filter media that is spirally wound with generally complete overlap and contact between adjacent layers. Column 2, lines 5-7 of May discuss a layer of cotton gauze 16 that has adhesive located thereon in order to hold the inner most layer 14 of the filter 10 in May together. The cotton gauze 16 is described as being wrapped in a spiral around the inner most layer 14. As shown in Figs. 1 and 2 of May, the cotton gauze 16 is but a single layer, and is **not a filter media** that is spirally wound with generally complete overlap and contact between adjacent layers as called for in claim 1 of Applicants' application.

May also discloses another layer of cotton gauze 19 that is spirally wrapped around a second layer of fibers 18 (see May at column 2, lines 31-34). As such, the cotton gauze layers 16 and 19 in May are not in contact with one another but are instead separated by a fiber layer 18 (see Figs. 1 and 2 of May). As previously mentioned, the filter media as set forth in the claims of Applicants' application is spirally wound with generally complete overlap and contact between adjacent layers. This structure is not disclosed in the filter 10 of May. Further, the cotton gauze 16 and 19 of May is not filter media but is instead simply wrapping that is used along with a suitable adhesive to hold the layers 14 and 18 together (see May at column 2, lines 4-7).

May also discloses another pair of layers 20 and 22 that are spirally wrapped. Layer 22 is a screen of 16 mesh fiberglass that is spirally wrapped around adjacent layer 20 in order to provide circumferential reinforcement so as to resist internal pressure within the filter 10 (see May at column 2, lines 41-47). Likewise, another layer 26 of 16 mesh fiberglass screen is located adjacent a second layer 24 (see May at column 2, lines 48-53). As with the cotton gauze layers 16 and 19, the 16 mesh fiberglass screen layers 22 and 26 are provided so as to hold the layer which they surround together. None of the layers 16, 19, 22 or 26 are in contact with one another but are instead all separated by at least another layer that is not spirally wound.

Referring now to the primary reference of Patrick, this reference is directed towards an antimicrobial filter cartridge 10 that employs a fibrous yarn 18 treated with an antimicrobial agent in order to kill microorganisms within water flowing through the filter cartridge 10 (see column 2, lines 12-13 of Patrick). The fibrous

yarn 18 is wrapped around a membrane layer 17 of the filter cartridge 10 so that there are no spaces between the turns of the yarn 18 thus eliminating any voids between the yarn 18 and the membrane 17 (see column 2, lines 13-17 of Patrick). The tight wrapping of the antimicrobial yarn 18 is an essential feature of the invention of Patrick and is stated as creating minimal void spaces between the yarn 18 and the membrane 17 to ensure sufficient contact between the contaminants and the antimicrobial treated yarn 18 to treat the contaminants without requiring long contact times between the fluid flow and the filter cartridge 10 (see column 2, lines 48-54 of Patrick).

Therefore, Patrick is specifically directed towards a filter cartridge 10 that employs an antimicrobial yarn 18. Incorporation of May into Patrick would cause the antimicrobial yarn 18 to be replaced with the layer of cotton gauze 16 or 19 disclosed in May. This resulting combination would not disclose all of the features of the claims of Applicants' application because the resulting device would not include a filter or filtration media that is spirally wound with generally complete overlap and contact between adjacent layers.

First, the cotton gauze 16, 19 in May is not a filter or filtration media, but is instead simply a layer used to hold an inner layer of the filter 10 together. Secondly, removal of the antimicrobial yarn 18 in Patrick and replacement with a layer of cotton gauze 16 or 19 would not result in a filtration or filter media that is spirally wound with generally complete overlap and contact between adjacent layers because the resulting device would have but a single layer. Further, if one were to instead simply incorporate the cotton gauze layer 16 or 19 of May into the cartridge 10 of Patrick instead of modifying the antimicrobial yarn 18 in Patrick, the resulting device would

include a cartridge 10 with a layer of fibrous yarn 18 that is held together by the cotton gauze layer 16 or 19 of May that is in turn surrounded by a criss-cross wrapping layer 21. This resulting filter would still not disclose all of the elements of claim 1 of Applicants' application because only a single layer, the cotton gauze 16 or 19, would be spirally wound and the yarn 18 and criss-cross wrapping layer 21 would be separated from contact with one another and would not be spirally wound.

The Examiner has not found the recited claim elements in the prior art or provided a proper suggestion to modify the prior art to achieve the claimed invention. As such, a *prima facie* case of obviousness has not been made because all of the claim elements have not been shown to be taught or suggested by the prior art.

B. THE FINAL REJECTION FAILS TO PROVIDE THE REQUIRED SUGGESTION OR MOTIVATION TO COMBINE PATRICK AND MAY.

In order to establish a *prima facie* case of obviousness there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references. Manual of Patent Examining Procedure, 700-46 (8 Ed. Rev. 2, May 2004). In the present case, there is no suggestion or motivation to modify Patrick in view of May to achieve Applicants' invention as set forth in claims 1-28, and there is no suggestion or motivation generally available to one of ordinary skill in the art to make the proposed combination as stated by the Examiner.

The invention and relevant disclsoure of Patrick are directed towards a cartridge 10 that has an antimicrobial yarn 18. The yarn 18 is wrapped in a close,

tight spiral so as to eliminate spaces between the turns or layers of the yarn and to ensure no voids are present between the yarn 18 and the mircroporous membrane 17 (see Patrick at column 2, lines 13-16; and column 4, lines 13-16). Microorganisms in Patrick are retained by being forced into contact with the antimicrobial agent in the yarn 18 because the tight spiral wrapping creates minimum void spaces between the yarn 18 and the membrane 17 (see Patrick at column 2, lines 46-50). As such, sufficient contact between the contaminants and the antimicrobial treated yarn 18 to remove and treat the contaminants is achieved without requiring long contact times between the fluid flow and filter cartridge 10 (see Patrick at column 2, lines 50-54).

It is therefore the case that the principle of operation in Patrick is to have a yarn 18 that is wrapped in a plurality of tight spirals that force contact between contaminants and the antimicrobial yarn 18. If a proposed combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims of Applicants' application *prima facie* obvious. *In re Rattie*, 270 F.2d 810, 123 U.S.P.Q. 394 (CCPA 1959). In our case, replacement of the yarn 18 in Patrick with the cotton gauze 16 of May would produce a resulting cartridge 10 in which filtration would not occur between tight spiral wrappings of the yarn 18 because the yarn 18 would no longer be in existence. Therefore, such a combination of references would entirely change the principle of filtration in Patrick and one having ordinary skill in the art would not be motivated to make such a modification.

Patrick additionally discloses a criss-cross wrapping layer 21 that is a layer of additional yarn wrapped around the yarn 18 in a standard criss-cross or diamond-

wrap pattern in order to create diamond-shaped openings through which water can travel (see Patrick at column 2, lines 14-20; and Fig. 1). Therefore, incorporation of the cotton gauze of May into the cartridge 10 of Patrick so that the criss-cross wrapping layer 21 was replaced with the cotton gauze 16 would again change the principle of operation of Patrick. Specifically, water would not be able to travel through diamond-shaped openings in order to contact the yarn 18 because replacement with the cotton gauze 16 of May would eliminate the diamond-shaped openings.

If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). In our case, replacement of the yarn 18 in Patrick with the cotton gauze 16 in May would produce a resulting filter that would not be able to work for its intended purpose. The cotton gauze 16 in May is not a component of filtering antimicrobial contaminants, but is instead only a layer that has adhesive whose purpose is to hold the inner most layer 14 of the filter 10 in May together (see May at column 2, lines 4-7). In fact, other layers in May such as the screen 22 and 26 are also incapable of filtering antimicrobial contaminants because as a screen, these layers 22 and 26 will easily allow contaminated fluid to pass. Therefore, such a combination would entirely frustrate the intended purpose of Patrick and would not have been obvious for one having ordinary skill in the art to make.

Applicants note that Patrick discloses an unclaimed and less favored, alternative embodiment that includes a non-woven fibrous mat or web 25 that is

wrapped around a microporous membrane 17' and core 12' (see column 5, lines 29-39 of Patrick). The fibrous mat or web 25 is a single layer and may be made of a thickness sufficient to provide the filter cartridge 10' with sufficient thickness to fit snuggly within the filter housing of a fluid filtration system (see column 5, lines 38-43 of Patrick and Fig. 4). As stated on page 2 of the Office Action mailed June 29, 2004, Patrick fails to disclose the spirally wound layers set forth in Applicants' claim. Incorporation of the cotton gauze 16 or 19 of May into the alternative embodiment of Patrick would result in the non-woven fibrous mat or web 25 being replaced by the cotton gauze 16 or 17 hence completely removing any antimicrobial treatment and filtration thus completely frustrating the intended purpose of Patrick and making Patrick unsuited for its intended use.

Simply adding the cotton gauze 16 or 19 of May into the alternative design in Patrick would still not result in the filtration device set forth in Applicants' claim because the resulting device would not have a filtration or filter media that is spirally wound with generally complete overlap and contact between adjacent layers. Here, the non-woven fibrous mat or web 25 would not be spirally wound. The fibrous mat or web 25 in the alternative embodiment in Patrick is disclosed as being a single layer that may be made in a thickness sufficient to allow for a snug fit within the filter housing, and there is no motivation present for one having ordinary skill in the art to modify the non-woven fibrous mat or web 25 so as to be spirally wound with generally complete overlap and contact between adjacent layers because the combination of May and Patrick both teach towards a filter or filtration layer that is but a single layer and not made of multiple layers in the manner set forth in Applicants' claims. Additionally, even if one were motivated to combine May with the

alternative embodiment disclosed in Patrick, the resulting combination would lack a filtration or filter media that is spirally wound with generally complete overlap and contact between adjacent layers and as such the resulting combination would not disclose or teach all of the claim elements set forth in Applicants' claims.

C. A RESONABLE EXPECTATION OF SUCCESS DOES NOT EXIST IN A COMBINATION PRODUCED BY COMBINING PATRICK AND MAY

Prior art references can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). In the present case, a reasonable expectation of success does not exist in producing a device obtained upon combining Patrick in view of May. The antimicrobial yarn 18 in Patrick is of a relatively small and limited diameter. The antimicrobial yarn 18 is required to be wrapped multiple times around the microporous membrane 17 in order to form the filtration layer. The cotton gauze 16 or 17 of May is a single flat sheet of material that is wrapped once around the layer 14 or 18. The antimicrobial yarn 18 in Patrick is incapable of being wrapped in the same manner as the cotton gauze 16 or 19 of May because the antimicrobial yarn 18 in Patrick has a completely different shape. Therefore, a reasonable expectation of success in spirally winding the antimicrobial yarn 18 in Patrick does not exist, in fact there is absolutely no expectation of success of spirally winding the antimicrobial yarn 18 in Patrick because the shape of the yarn makes it impossible to be spirally wound in the manner set forth in the

claims of Applicants' application. As such, a *prima facie* case of obviousness does not exist.

D. THE FINAL REJECTION RELIES ON HINDSIGHT FOR THE ALLEGED MOTIVATION TO COMBINE THE PATRICK AND MAY REFERENCES

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not in Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q. 2d 1438 (Fed. Cir. 1991). Absent Applicants' disclosure, there is simply no motivation for one skilled in the art to combine Patrick and May in order to arrive at a filtration device that includes a filtration or filter media that is spirally wound with generally complete overlap and contact between adjacent layers such that edges of the layers are generally aligned in a common plane as set forth in the claims of Applicants' application.

The Examiner has failed to identify any prior art where such a combination is suggested. The only place that the Examiner could have attained the combination of Patrick and May is through Applicants' own disclosure. It is impermissible to use Applicants' disclosure as an instruction manual in order to piece together various portions of the prior art so that Applicants' claimed invention is rendered obvious. *In re Fritch*, 972 F.2d 1260, 1266, 23 U.S.P.Q. 2d 1780 (Fed. Cir. 1992).

In making an obviousness determination, to give one of ordinary skill in the art knowledge of the invention, when no prior art references convey or suggest that knowledge, "is to fall victim to the insidious effect of a hindsight syndrome where that

which only the inventor taught is used against the teacher." *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1533, 220 U.S.P.Q. 303, 312-13 (Fed. Cir. 1983).

The claims of Applicants' application are directed towards a filtration device that has a new combination of elements. Patrick and May do not expressly or impliedly suggest combination with one another in order to obtain Applicants' invention as set forth in the stated claims. The Examiner's stated motivation for combining the references ("in order to ensure that these filtration layers do not separate from one another") would not have motivated one to incorporate May into Patrick because Patrick already discloses a criss-cross wrapping layer with diamond-shaped openings that is used to hold the antimicrobial yarn 18 together. Even if one were to remove the criss-cross wrapping layer 21 and replace this layer with the cotton gauze 16 or 19 of May, the resulting device would still lack the elements set forth in the claims of Applicants' application that call for a filtration or filter media to be spirally wound with generally complete overlap and contact between adjacent layers.

It would not have been obvious for one having ordinary skill in the art to selectively pick and choose elements or concepts from May and Patrick and then to modify this combined device so as to arrive at the invention set forth in the claims of Applicants' application without using Applicants' own disclosure as a guide to obtain the stated combination and subsequent modification. As stated, hindsight is not a proper criteria for resolving the issue of obviousness and as such a case of *prima facie* obviousness has not been made. Therefore, Applicants respectfully submit

that independent claims 1, 13 and 24 define over the combination of Patrick in view of May as the stated claims are non-obvious.

E. CONCLUSION

Applicants respectfully submit that independent claims 1, 13 and 24 are patentable over the cited references. If an independent claim is non-obvious under 35 U.S.C. §103(a) then any claim depending therefrom is non-obvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir 1988). Claims 2-12, 14-23 and 25-28 are dependent claims that depend either directly or indirectly from independent claims 1, 13 and 24 that are non-obvious under 35 U.S.C. §103(a). Applicants therefore respectfully submit that claims 2-12, 14-23, 25-28 are patentable under 35 U.S.C. §103(a) in view of the prior art.

Applicants respectfully submit that the final rejection of claims 1-28 should be reversed, and that these claims should be allowed to issue in a U.S. Patent.

Respectfully submitted,

DORITY & MANNING, P.A.

November 22, 2004
Date:

Neal P. Pierotti
Reg. No. 45,716
P.O. Box 1449
Greenville, SC 29602-1449
(864) 271-1592
Facsimile (864) 233-7342

APPENDIX

CLAIMS (AS AMENDED) INVOLVED IN APPEAL:

1. A filtration device, comprising:

an unfiltered fluid inlet surface, through which unfiltered fluid may enter the filtration device;

a first filter media in fluid communication with the unfiltered fluid inlet surface, said first filter media being spirally wound and being positioned with respect to said unfiltered fluid inlet surface so that unfiltered fluid entering the filtration device through the unfiltered fluid inlet surface is directed to flow radially inward and through the first filter media, said first filter media being spirally wound with generally complete overlap and contact between adjacent layers such that edges of said layers are generally aligned in a common plane;

a core in fluid communication with the first filter media, said core having a surface that defines apertures, said core being positioned with respect to said spirally wound first filter media so that filtered fluid flowing radially inward from the first filter media flows into the core, said core having a first end and a second end with said first end being open so that filtered fluid may exit the core and with said second end being closed so that the flow of fluid through the second end is prevented; and

a filtered fluid outlet in fluid communication with the first end of the core so that filtered fluid flowing from the first end of the core exits the filtration device through the filtered fluid outlet.

2. A filtration device as in claim 1, further comprising a second filter media in fluid communication with the unfiltered fluid inlet surface, said second filter media being spirally wound around the first filter media so that fluid flowing from the unfiltered fluid inlet surface flows radially inward through the second filter media and into the first filter media.

3. A filtration device as in claim 2, wherein the first filter media comprises activated carbon and the second filter media comprises a charge-modified material.

4. A filtration device as in claim 3, wherein the filtration device is configured for installing into a water sprayer of a sink assembly so that filtered water may be provided from the sprayer.

5. A filtration device as in claim 2, further comprising a third filter media in fluid communication with the unfiltered fluid inlet surface, said third filter media being spirally wound around the second filter media so that fluid flowing from the unfiltered fluid inlet surface flows radially inward through the third filter media and into the second filter media.

6. A filtration device as in claim 5, further comprising a fourth filter media in fluid communication with the unfiltered fluid inlet surface, said fourth filter media being spirally wound around the third filter media so that fluid flowing from the unfiltered fluid inlet surface flows radially inward through the fourth filter media and into the third filter media.

7. A filtration device as in claim 1, further comprising a second filter media in fluid communication with the unfiltered fluid inlet surface, said second filter media positioned so that fluid flowing from the unfiltered fluid inlet surface flows radially inward through the second filter media and into the first filter media.

8. A filtration device as in claim 1, wherein said core is cylindrically shaped.

9. A filtration device as in claim 1, wherein the first filter media comprises activated carbon.

10. A filtration device as in claim 9, wherein the filtration device is configured for installing into a water sprayer of a sink assembly so that filtered water may be provided from the sprayer.

11. A filtration device as in claim 1, wherein the first filter media comprises a laminate of filter media.

12. A filtration device as in claim 1, wherein the filtration device is configured for installing into a water sprayer of a sink assembly so that filtered water may be provided from the sprayer.

13. A filtration device, comprising:

an unfiltered fluid inlet, through which unfiltered fluid may enter the filtration device;

a core in fluid communication with the unfiltered fluid inlet, said core having a surface defining apertures therein so that unfiltered fluid may flow from the unfiltered fluid inlet and radially outward through the core;

said core having a first end and a second end, wherein said first end is open so that unfiltered fluid may enter the core and wherein said second end is closed so that flow of fluid through the second end is prevented;

a first filter media in fluid communication with the core, said filter media being spirally-wound around the surface of the core so that fluid flowing from the core may flow radially outward through the apertures and into the first filter media, said first

filter media being spirally wound with generally complete overlap and contact between adjacent layers such that edges of said layers are generally aligned in a common plane; and

a filtered fluid outlet surface in fluid communication with the first filter media so that filtered fluid from the first filter media may exit the filtration device through the filtered fluid outlet surface.

14. A filtration device as in claim 13, further comprising a second filter media in fluid communication with the filtered fluid outlet surface, said second filter media being spirally wound around the surface of the first filter media so that filtered fluid from the first filter media may flow radially outward, through the second filter media, and then may exit the filtration device through the filtered fluid outlet surface.

15. A filtration device as in claim 14, wherein the first filter media comprises a charge-modified material and the second filter media comprises activated carbon.

16. A filtration device as in claim 15, wherein the filtration device is configured for installing into the water sprayer of a sink assembly so that filtered water may be provided from the sprayer.

17. A filtration device as in claim 14, further comprising a third filter media in fluid communication with the filtered fluid outlet surface, said third filter media being spirally wound around the surface of the second filter media so that filtered fluid from the second filter media may flow radially outward, through the third filter media, and then may exit the filtration device through the filtered fluid outlet surface.

18. A filtration device as in claim 17, further comprising a fourth filter media in fluid communication with the filtered fluid outlet surface, said fourth filter media

being spirally wound around the surface of the third filter media so that filtered fluid from the third filter media may flow radially outward, through the fourth filter media, and then may exit the filtration device through the filtered fluid outlet surface.

19. A filtration device as in claim 13, further comprising a second filter media in fluid communication with the filtered fluid outlet surface, said second filter media being positioned with respect to the first filter media so that filtered fluid from the first filter media may flow radially outward, through the second filter media, and then may exit the filtration device through the filtered fluid outlet surface.

20. A filtration device as in claim 13, wherein said core is cylindrically shaped.

21. A filtration device as in claim 13, wherein the first filter media comprises activated carbon.

22. A filtration device as in claim 13, wherein the first filter media comprises a laminate of filter media.

23. A filtration device as in claim 13, wherein the filtration device is configured for installing into the water sprayer of a sink assembly so that filtered water may be provided from the sprayer.

24. A filtration device, comprising:

a housing defining an interior volume, an inlet for allowing fluid to be filtered to enter the volume, and an outlet for filtered fluid to exit the volume;

a core located within the volume, the core defining a chamber; at least one aperture allowing fluid communication through the core and into the chamber; and an exit orifice in fluid communication with the outlet; and,

a spirally wound filtration media located within the volume and configured so that fluid entering the volume from the inlet is directed to flow radially inward and through the filtration media, through the core, and into the chamber and out of the outlet, said filtration media being spirally wound with generally complete overlap and contact between adjacent layers such that edges of said layers are generally aligned in a common plane.

25. A filtration device as in claim 24, wherein the spirally wound filtration media comprises activated carbon.

26. A filtration device as in claim 24, wherein the filtration device is configured for installing into a water sprayer of a sink assembly so that filtered water may be provided from the sprayer.

27. A filtration device as in claim 24, wherein said core is cylindrically shaped.

28. A filtration device as in claim 24, wherein the spirally wound filtration media comprises a laminate of filter media.

AF/IM

DM-10/2003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Re: Appeal to the Board of Patent Appeals and Interferences

In re Application of: Bruce S. Williamson, et al. Group Art Unit: 1724

Serial No.: 09/712,085 Examiner: I. Cintins

Filed: November 14, 2000 Our Customer ID: 22827

Confirmation No.: 8779 Our Account No.: 04-1403

For: Filtration Device Attorney Ref.: KCX-224 (15065)

Sir:

1. [ ] **NOTICE OF APPEAL**: Pursuant to 37 CFR 41.31, Applicant hereby appeals to the Board of Appeals from the decision dated ____ of the Examiner twice/finally rejecting claims ____.
2. [X] **BRIEF** on appeal in this application pursuant to 37 CFR 41.37 is transmitted herewith (1 copy)
3. [ ] An **ORAL HEARING** is respectfully requested under 37 CFR 41.47 (due within one month after Examiner's Answer).
4. [ ] Reply Brief under 37 CFR 41.41(b) is transmitted herewith (1 copy).
5. [ ] "Small entity" verified statement filed: [ ] herewith [ ] previously.
6. **FEE CALCULATION:**

	Fees
If box 1 above is X'd enter $340.00	$_____
If box 2 above is X'd enter $340.00	$ 340.00
If box 3 above is X'd enter $300.00	$_____
If box 4 above is X-d enter –0- (no fee)	$_____
Petition is hereby made to extend the original due date of _____ to cover the date of this paper and any enclosure for which the requisite fee is (1 month $110); (2 months $430); (3 months $980); (4 months $1,530), (5 months $2,080)	$_____
Subtotal	$ 340.00
Less any previous extension fee paid since above original due date.	- $_____
Subtotal	$ 340.00
If "small entity" box 5 above is X'd, enter one-half (1/2 of subtotal and subtract)	- $_____
TOTAL FEE	$ **340.00**

[X] Fee enclosed.
[ ] Charge fee to our Deposit Account/Order Nos. in the heading hereof (for which purpose one additional copy of this sheet is attached)
[ ] Fee NOT required since paid in prior appeal in which the Board of Appeals did not render a decision on the merits.

The Commissioner is hereby authorized to charge any fee specifically authorized hereafter, or any fees in addition to the fee(s) filed, or asserted to be filed, or which should have been filed herewith or concerning any paper filed hereafter, and which may be required under Rules 16-18 (deficiency only) now or hereafter relative to this application and the resulting official document under Rule 20, or credit any overpayment, to our Account No. show in the heading hereof for which purpose a duplicate copy of this sheet is attached. This statement does not authorize charge of the issue fee in this case.

ADDRESS:
Post Office Box 1449
Greenville, SC 29602 USA
Customer ID No.: 22827
Telephone: 864-271-1592
Facsimile: 864-233-7342

DORITY & MANNING, ATTORNEYS AT LAW, P.A.

By: Neal P. Pierotti Reg. No.: 45,716
Signature: Neal P. Pierotti
Date: November 22, 2004

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, U.S. Patent and Trademark Office, Post Office Box 1450, Alexandria, VA 22313-1450, on November 22, 2004.

Denise Bulkeley
(Typed or printed name of person mailing paper or fee)
Denise Bulkeley
(Signature of person mailing paper or fee)